

REMARKS

Claims 1-36 are pending in the application.

Claims 1-22, 26, 29, 30, 34 and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,028,842 to Chapman et al, hereinafter "Chapman".

Claims 1 and 36 are independent claims. Applicant respectfully traverses this rejection.

Claim 1 provides a method of classifying data traffic in a packet-based communications network conveying different classes of data. The method includes the steps of (a) monitoring a communications network for data traffic to identify a sequence of data packets of unknown class transmitted between a source address and a destination address, (b) measuring a plurality of parameters of at least a significant part of the packet sequence, and (c) deriving from the measured plurality of parameters a probable classification of the data conveyed in the packet sequence. The plurality of parameters includes any one of: coding attributes of packets in the sequence, type of transport protocol used, type of error protection protocol used, duration of said sequence, and correlation between traffic in the sequence and traffic in a further sequence being transported from the destination address back to the source address.

Chapman discloses a method and apparatus for monitoring and classifying traffic into one of a plurality of preset classes according to a set of classification parameters, for controlling delivery of the traffic downstream according to quality of service (QoS) parameters specified by the dynamically selected class (col. 2, lines 25-32). Chapman states at col. 2, lines 1 to 3 that the method and apparatus allow the network to discover the nature of a service for each traffic flow, classify it dynamically and exercise so-called traffic "conditioning".

Inspection of addresses and ports allow the system to identify traffic flows (col. 3, lines 38-43). A controller 14 is then used to characterize the flow (using rate, duration,

etc.) and to assign it a class (col. 3, lines 12-13).

The controller 14 characterizes flows and classifies them into one of the six classes disclosed over columns 3 and 4. Chapman further states, at col. 4, lines 33-39:

“... discrimination between traffic types is based on simple analysis of packet arrival rates and packet length plus a particular test for UDP traffic which will be described below. Although it is possible to use port numbers in some instances to determine service type, this method is not consistent enough for general use.”

Furthermore, Chapman discloses that identifying real-time traffic is a two-stage process. The first stage involves identifying whether or not UDP is used for transmission error coding (col. 4, line 44 through col. 5, line 50). Chapman then discloses, in col. 5, line 50 through col. 6, line 8, two possible ways of identifying a second criterion, namely the self-clocked nature of real-time packet flows. In order to detect real-time flows, Chapman explains the difference between real-time UDP flows and other UDP applications. Chapman discloses two ways in which to detect real time flows.

Due to the respective natures of these two distinct types of UDP traffic, the queues 10 of the traffic conditioner are subjected to different queuing behavior under congestion conditions. It is this behavior at the queues under congestion conditions that is one way of distinguishing between real-time UDP traffic and other UDP traffic. When the traffic is real-time UDP traffic, the size of a queue for the real-time UDP traffic grows without bound under congestion conditions, whereas other UDP traffic in another queue grows to a limit of 8K (in the case of NFS). However, this technique is dismissed as impractical due to the need to await a congestion condition.

Chapman suggests a second way to identify real time flows - keeping a history of interarrival times of packets to distinguish between self-clocked and non-self-clocked streams. Non-self-clocked being indicative of real-time traffic (the interarrival times are

tested against thresholds to arrive at a determination of self-clocked or non-self-clocked streams).

As discussed in Applicant's first response, UDP employment is a first indicator of real-time packet flows according to Chapman. According to Applicant's technical expert, in order to ascertain whether or not UDP is being employed, a person skilled in the art would read Chapman as instructing **to only analyze a first packet received**. No further verification of subsequent packets for use of UDP is carried out.

Therefore, Chapman discloses only analyzing a first packet of a packet flow to determine if UDP is being used. This analysis disclosed in Chapman does not constitute measuring a plurality of parameters over at least a significant part of the packet sequence, because Chapman does not disclose **measuring both the parameters**, i.e., whether UDP is employed and whether a stream is self-clocked, **in at least a significant part of the packet sequence**.

In contrast, claim 1 provides that measurement of **a plurality of parameters** is performed on **at least a significant part of the packet sequence**. Claim 1 recites the features of measuring a plurality of parameters from a list of parameters, and measuring each of the plurality of parameters over at least a significant part of the packet sequence.

Chapman does not disclose or suggest a method of classifying data traffic including "measuring a plurality of parameters of at least a significant part of the packet sequence," or "deriving from the measured plurality of parameters a probable classification of the data conveyed in the packet sequence," as recited in claim 1. Thus, Chapman fails to disclose or suggest the elements of claim 1. Therefore, claim 1 is patentable over Chapman.

Claims 2-22, 26, 29, 30 and 34 depend from claim 1. For at least reasoning similar to that provided in support of the patentability of claim 1, claims 2-22, 26, 29, 30

and 34 are patentable over Chapman.

Claim 36 recites features similar to that recited in claim 1. For at least reasoning similar to that provided in support of the patentability of claim 1, claim 36 is patentable over Chapman.

For the reasons set forth above, the rejection of claims 1-22, 26, 29, 30, 34 and 36 under 35 U.S.C. 102(b) as anticipated by Chapman is overcome. Applicant respectfully requests that the rejection of claims 1-22, 26, 29, 30, 34 and 36 be reconsidered and withdrawn.

Claims 23-25 and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chapman in view of U.S. Patent No. 6,597,600 to Rueda et al., hereinafter "Rueda". Applicant respectfully traverses this rejection.

As discussed above, Chapman does not disclose or suggest a method of classifying data traffic including "measuring a plurality of parameters of at least a significant part of the packet sequence," or "deriving from the measured plurality of parameters a probable classification of the data conveyed in the packet sequence," as recited in claim 1. Thus, Chapman fails to disclose or suggest the elements of claim 1.

Applicant does not believe that Rueda makes up for the deficiencies of Chapman, as it applies to claim 1. Accordingly, Applicant submits that claim 1 is patentable over the cited combination of Chapman and Rueda.

Claims 23-25 and 27-28 depend from claim 1. For at least reasoning similar to that provided in support of the patentability of claim 1, claims 23-25 and 27-28 are patentable over the cited combination of Chapman and Rueda.

For the reasons set forth above, the rejection of claims 23-25 and 27-28 under 35 U.S.C. 103(a) as being unpatentable over Chapman in view of Rueda is overcome.

Applicant respectfully requests that the rejection of claims 23-25 and 27-28 be reconsidered and withdrawn.

Claims 31 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chapman in view of U.S. Patent No. 6,640,248 to Jorgenson, hereinafter "Jorgenson". Applicant respectfully traverses this rejection.

As discussed above, Chapman does not disclose or suggest the elements of claim 1. Applicant does not believe that Jorgenson makes up for the deficiencies of Chapman, as it applies to claim 1. Accordingly, Applicant submits that claim 1 is patentable over the cited combination of Chapman and Jorgenson.

Claims 31 and 35 depend from claim 1. For at least reasoning similar to that provided in support of the patentability of claim 1, claims 31 and 35 are patentable over the cited combination of Chapman and Jorgenson.

For the reasons set forth above, the rejection of claims 31 and 35 under 35 U.S.C. 103(a) as being unpatentable over Chapman in view of Jorgenson is overcome. Applicant respectfully requests that the rejection of claims 31 and 35 be reconsidered and withdrawn.

Claims 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chapman in view of U.S. Patent No. 6,651,099 to Dietz et al., hereinafter "Dietz". Claims 32 and 33 depend from claim 1. Applicant respectfully traverses this rejection.

As discussed above, Chapman does not disclose or suggest the elements of claim 1. Applicant does not believe that Dietz makes up for the deficiencies of Chapman, as it applies to claim 1. Accordingly, Applicant submits that claim 1 is patentable over the cited combination of Chapman and Dietz.

Claims 32 and 33 depend from claim 1. For at least reasoning similar to that

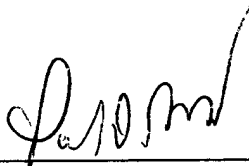
provided in support of the patentability of claim 1, claims 32 and 33 are patentable over the cited combination of Chapman and Dietz.

For the reasons set forth above, the rejection of claims 32 and 33 under 35 U.S.C. 103(a) as being unpatentable over Chapman in view of Dietz is overcome. Applicant respectfully requests that the rejection of claims 32 and 33 be reconsidered and withdrawn.

An indication of the allowability of all pending claims by issuance of a Notice of Allowability is earnestly solicited.

Respectfully submitted,

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